



Calgary River Valleys champions and engages the public in the protection, appreciation and stewardship of Calgary's rivers, creeks, wetlands and watershed resources.

We are the voice of our rivers.

February 26, 2021

Attention: **Natural Resources Conservation Board (NRCB)**
Sent via email to: Laura.Friend@NRCB.ca

Re: **Springbank Off-Stream Reservoir Project**
NRCB Application No. 1701

Calgary River Valleys or CRV (legally known as Calgary River Forum Society) is a not-for-profit environmental stewardship organization. Our working Board and its committees strive to maintain an informed advisory capacity in support of the stewardship of rivers, creeks, valleys, wetlands, and riparian areas in the Calgary region. CRV has members and partners in all areas of the Calgary region, including those areas near the Elbow River that will be impacted by the Springbank Off-Stream Reservoir Project (SR1).

While Calgary River Valleys is not requesting intervener status for the hearing regarding this project, in our advisory capacity we are attaching a copy of a letter we submitted on February 3, 2021 to the Impact Assessment Agency of Canada (IAAC) outlining questions and concerns that were raised and that we were asked to submit in writing regarding this project. We have not yet received a reply to that letter. A summary of questions and concerns that we believe need to be addressed are outlined here. We ask that the NRCB also consider these questions and concerns prior to making their decision.

1. Cumulative Impacts on Broader South Saskatchewan River Basin

We are concerned there do not appear to be any studies that have been completed to determine the effects of incremental and cumulative damming and "training" of our rivers individually and collectively over time.

2. Risk of Future Flood Damage

We are concerned that the SR1 project, especially given it has no other public purpose, such as power generation, except to protect development within the Elbow River flood plain (to a certain level of risk), may have the effect of condoning and even encouraging future additional development within the flood plain downstream of the project. The sole beneficiaries of SR1 are those who own property and infrastructure within the flood plain.

We understand that, combined with the new Glenmore Dam flood gates, once SR1 is operational, these two flood mitigation infrastructure installations will be able to handle the flood volume equivalent to that seen on the Elbow River in 2013. However, we also





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know it is not a matter of "if" but of "when" this 2013 level of flow will eventually be exceeded. A high water event with flow rates and flood volumes in excess of the capacity of the project will result in disaster and most likely tragic flood damage for properties within the flood plain, including almost certainly many more developments and people who will be allowed to build in the flood plain because of this project.

CRV members who provided input have questioned this kind of approach to natural high water events / flooding and whether we should be looking at better long-term strategies and solutions. We should be not encouraging more development within the flood plain.

3. Impacts on the Natural Functionality of the Elbow River and its Valley

We were not able to confirm if the SR1 basin lands will be constructed in such a way as to allow infiltration of precipitation into the ground, and thereby continue to support the flow of groundwater to seeps, springs, and wetlands downstream or downslope within the geological strata from the project.

We also believe, given the large monetary costs for the SR1 project, it would be a positive step to set aside some additional funds to restore and retain as much of the Elbow River valley's natural functionality as possible.

You can reach me at the mailing address on this letterhead, or by email to my attention at CalgaryRiverValleys2@outlook.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bill Morrison", with a horizontal line extending to the right.

Bill Morrison, President
Calgary River Valleys (Calgary River Forum Society)

Attachment: CRV Letter to IAAC, February 3, 2021

Cc: CRV Board & circulation





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February 3, 2020

Attention: **Impact Assessment Agency of Canada**
Canada Place; 9700 Jasper Ave, Suite 1145
Edmonton, AB T5J 4C3
Sent via email to: iaac.springbank.aeic@canada.ca

Re: **Springbank Off-Stream Reservoir Project (SR1)**
Reference #: **80123**

Calgary River Valleys or CRV (legally known as Calgary River Forum Society) is a legally constituted not-for-profit environmental stewardship organization in Calgary whose main focus is stewardship of rivers, valleys, creeks, wetlands, and riparian areas of Calgary and the surrounding region. Our organization was formed in 1991 by direction of Calgary City Council under our original name of the River Valleys Committee of Parks Foundation Calgary. We became an independent society in 2010. Our society works on a collaborative basis with many individuals and organizations who live and work near and around river-edge and river-adjacent areas; we jointly work to protect these areas.

CRV has members and partners in all areas of the Calgary region. Our organization has participated as a stakeholder in numerous projects involving various rivers, creeks, and wetlands in Calgary and region, as well as on development of policies for the City of Calgary. These include policies on the issues of open space, wetland and biodiversity protection, storm water management, and erosion and sediment control. CRV has also worked on a variety of projects with the Bow River Basin Council, which is the local Watershed Planning Advisory Committee. We have participated regionally, including as a Stakeholder in the development of the South Saskatchewan Regional Plan.

We understand the Springbank Off-Stream Reservoir (SR1) project is designed to temporarily store excess volume and flow from the Elbow River during flood conditions, and is designed to manage, in concert with other flood mitigation measures, the volume of water equivalent to the amount from the 2013 flood. We also understand there are no additional functions for SR1, such as water storage for drinking or irrigation uses as well as recreational uses, or power generation.

Some of our members were able to sit in on at least one of the Information Sessions offered by the Impact Assessment Agency of Canada about this project. Some questions we had about the project could not be answered during this session, or within the Draft Environmental Assessment Report, and we were invited to submit our questions and feedback in writing. As a result, we provide this letter to ensure the questions our organization has about the impacts the Springbank Off-Stream Reservoir (SR1) project may have on the river,



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the surrounding environment, and downstream¹⁰⁰ have been considered. Our questions about the impacts of this project are in three main categories.

1. **Cumulative Impacts on Broader South Saskatchewan River Basin:** Our organization is not aware of any studies done on the cumulative impacts that this new flood mitigation structure will have on the broader South Saskatchewan River basin, to which the Elbow River belongs. The South Saskatchewan River Basin (SSRB) consists of the following major river watersheds: the Bow (including the Elbow), the Red Deer, and the Oldman Rivers.

Every time a river is dammed there are long-term impacts on the river system for wildlife, human users, municipalities, and First Nations. There are already multiple dam structures, channelized sections or riverbank armouring on every major river in the SSRB. These function for various reasons, including flood control, power generation, water storage for irrigation and consumption, and/or recreation. Each of these dams and in-river structures have an impact on the natural flow and functionalities of the river. Some of the major dams within the SSRB include the Glenmore Dam (on the Elbow River in Calgary, near Tsuut'ina First Nation), Bearspaw Dam (on the Bow River in west Calgary), the Horseshoe Dam (on the Bow River, upstream of Calgary on Stoney Nakoda First Nation lands, near the town of Exshaw), the Ghost Dam (on the Bow River, upstream of Calgary near the town of Cochrane), the Oldman Dam (on the Oldman River southwest of Calgary, near the Piikani First Nation and the town of Pincher Creek, and upstream of the Blood Tribe lands), and the Dickson Dam (on the Red Deer River north of Calgary, near the town of Innisfail). In addition, planning and consultation is underway for up to 3 more flood control structures or dams on the Bow River upstream of Calgary.

Question 1a): Have cumulative impact studies been done on a broader basis for the larger SSRB?

Question 1b): If not, have the impact studies already complete for each sub-region of the SSRB been compared and reviewed for how the impacts from each sub-region area, which are incremental but also inevitable, will affect the larger river basin?

Question 1c): If these studies have been done, will they be released to the public for review?

Question 1d): Has consultation been made with communities and First Nations downstream of Calgary regarding the impacts that will occur in their region, due to the SR1 project?

2. **Risk of Future Flood Damage:** While our members agree that building flood protection structures and dams has value to some aspects of society, we are concerned that building the SR1 structure, and similar in future, will create a false sense of security from future flood damage, especially with the possibility of more intense precipitation events due to climate change.

We are concerned that with each new dam and flood control measure, it serves to condone and encourage development within the floodplain of our rivers and creeks. In addition, every new manmade structure



built within the flood risk areas of Calgary serves to diminish the river's natural green infrastructure defences such as willow shrubs, and cottonwood and poplar trees that prevent erosion of riverbanks, reduce the power of floodwater, remove sediment from the river, and absorb significant water during a river's flood stage. Removing these natural defences to build more hardscape within the river's floodplain will likely result in exponential increase of flood damage in the future. For example, it should be noted that the new Calgary Event Centre, to replace the Saddledome arena, has very recently already been approved to be built in a flood-prone area near the Elbow River.

Question 2a): Has consideration been made to require the planning authorities and municipalities downstream of SR1, as part of the federal environmental impact approval for the project, to cease providing approvals for buildings and structures within Calgary's flood risk areas?

- 3. Impacts on the Natural Functionality of the Elbow River and Its Valley:** We were not able to get any information about the design of the base layer of the reservoir for SR1, as to whether it will be lined with clay, or artificial material, to prevent oversaturation and destabilization when used for flood control. However, such a lining would also prevent infiltration of rain and snowmelt that filter down to join the sub-surface water regime, and provide recharge to local springs, seeps, and aquifers. Given that the lands that make up the basin for SR1 will continue to operate as grazing lands, or wildlife habitat, we believe it is imperative that these lands be allowed to remain in a state as natural as possible.

Question 3a): Will the SR1 basin lands be designed to prevent infiltration of rainfall and snowmelt?

In addition, we know that natural green infrastructure, such as riparian-adapted vegetation, provides an excellent defence against flooding. However, we were not able to find any information that indicated if there will be requirements for the proponent of this project to fund projects in the downstream valleys to compensate for the loss of the river functionalities and the river being able to access its floodplain.

Question 3b): Has consideration been made to require the proponent, as part of the federal environmental impact approval for the project, to set aside compensatory funds for the loss of the river functionalities downstream?

In addition, a question was raised during the Information Session to inquire as to what the plan was going to be regarding the existing seeps and springs within the planned SR1 basin lands. An answer for this question was not provided during that session, and we could find no information elsewhere. These surface watercourses provide habitat for wildlife as well as serve to recharge the aquifer. The reservoir lands will be "dry" for the vast majority of most years and not needed for flood mitigation.

Question 3c): What will happen with the existing springs, seeps, and other surface watercourses within the SR1 lands; will they be piped off, or will they be allowed to remain functional?



The SR1 project is very expensive, in terms of investment, intervention, as well as the impacts of the intervention. Members of Calgary River Valleys believe it is important to ensure that the impacts we have from projects such as SR1 on our natural river environment are structured in such a way as to allow us to retain as much of the river's natural functionality as possible, to retain the possibility of allowing the public to celebrate our rivers, to ensure Calgary's rivers retain their "world class" reputation, and that we respect those who are downstream of us. We would also like to see that principles are put into place so that development on our rivers' floodplains is restricted, so these kinds of projects are not required in future.

You can reach me at the mailing address on this letterhead, or by email to my attention at CalgaryRiverValleys2@outlook.com .

Sincerely,



Bill Morrison, President
Calgary River Valleys (Calgary River Forum Society)

Cc: CRV Board & circulation

